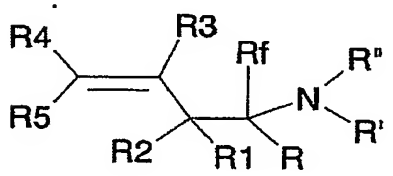
CLAIMS

1. A compound comprising at least one carbon bearing:
   - an amine function;
   - an allyl or propargyl radical;
   - a difluoromethylene group;

   and
   - a hydrogen or a hydrocarbon-based radical advantageously chosen from those which are electron-donating or weakly electron-withdrawing ($\sigma_p \leq 0.2$, advantageously to 0.1) radicals.

2. A compound as claimed in claim 1, characterized in that the number of carbons of said compound is at most 30 carbon atoms, advantageously at most 20 carbon atoms.

3. A method for synthesizing a compound of formula I:



where:
- Rf represents a carbon radical bearing a difluoromethylene group providing the link with the rest of the molecule, advantageously of at most 15, preferably of at most 10, carbon atoms;
- R_1 represents a hydrogen, an alkyl, including aralkyl, radical, preferably of 1 or 2 carbon atoms, or one of the specific radicals subsequently specified;
- R_2 represents a hydrogen, an alkyl, including aralkyl, radical, preferably of 1 or 2 carbon atoms, or an aryl radical;

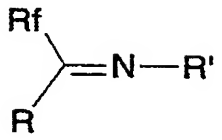
- R_3 represents a hydrogen or a hydrocarbon-based radical, such as alkyl, including aralkyl, preferably of 1 or 2 carbon atoms, or an aryl radical, or forms, with R_4, an additional double bond so as to convert the allyl radical into a propargyl radical;
- R_4 represents a hydrogen or a hydrocarbon-based radical such as aryl or alkyl, including aralkyl, preferably of 1 or 2 carbon atoms, or, with R_3, forms an additional double bond so that the ethylenic bond becomes acetylenic, making it possible to go from an allyl radical to a propargyl radical;
- R_5 represents a hydrogen or a hydrocarbon-based radical such as an aryl radical or an alkyl, including aralkyl, radical, preferably of 1 or 2 carbon atoms;
- R_5 and R_4 may be fractions of said "Ar" group above, such that R_5 and R_4, and also the carbon which bears them, form a radical Ar;
- it being possible for one of R_1, R_2, R_4, R_3 and R_5 to be, in addition, chosen from specific trivalent, nitrile or acid functions, optionally and preferably in esterified form;
- R' may be a hydrogen, a protective group, an aryl or an alkyl, including aralkyl, advantageously a chiral alkyl or aralkyl;
- R" is an allyl radical, a hydrogen or a metal cation, or a fraction of metal cations, when the metal is polyvalent;

by means of the action of an allyl organometallic on an imine bearing difluoromethylene groups.

4. The method as claimed in claim 3, characterized in that said organometallic is prepared in situ, according to a "Barbier" technique.

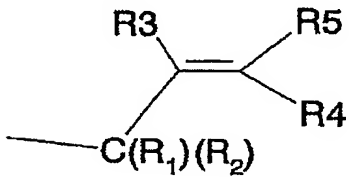
5. The method as claimed in claims 3 and 4, characterized in that the imine is of formula

(II):



where R is chosen from the halogens and from the hydrocarbon-based radicals chosen from those which are electron-donating or weakly electron-withdrawing radicals, and Rf has the same value as above and where R' is advantageously an alkyl, including aralkyl, including chiral, protective group.

6. The method as claimed in claims 3 to 5, characterized in that the allyl radical of said organometallic corresponds to formula III:



7. The method as claimed in claims 3 to 6, characterized in that the reaction is carried out in a polar aprotic solvent for which the donor number is at least equal to 10, advantageously at least equal to 20.

8. The method as claimed in claims 3 to 7, characterized in that it also comprises a step of N-allylation, by means of the action of an allyl derivative of formula IV on the free amine.

9. The method as claimed in claims 3 to 8, characterized in that the Rf group corresponds to the formula below:

$GEA-(CX_2)_p-$

where:

- the X, which may be similar or different, represent a chlorine, a fluorine or a radical of formula C_nF_{2n+1}, with n an integer at most equal to 5, preferably to 2, with the condition that at least one of the X is fluorine, which fluorine is advantageously borne by the carbon bearing the open bond;
- p represents an integer at most equal to 2, i.e. 1 or 2;
- GEA represents an electron-withdrawing group (i.e. sigma p greater than zero, advantageously than 0.1, preferably than 0.2) the possible functions of which are inert under the reaction conditions, advantageously fluorine or a perfluorinated residue of formula C_nF_{2n+1}, with n an integer at most equal to 8, advantageously to 5;

the total number of carbons of Rf being advantageously between 1 and 15, preferably between 1 and 10.

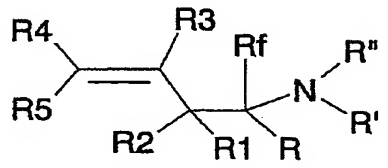
10. The method as claimed in claim 9, characterized in that the total number of carbons of the radical Rf is between 1 and 14, advantageously between 1 and 10, more preferably from 1 to 4.

11. The method as claimed in claims 9 and 10, characterized in that the radical Rf is a radical sensu stricto, i.e. it corresponds to the formula C_v,F_{v+1}, where ν is an integer ranging from 1 to 10, advantageously of at most 4, most commonly of at most 2.

12. The method as claimed in claims 9 to 11, characterized in that the radical Rf is chosen from the difluoromethyl (CHF_2) radical and the trifluoromethyl radical, the latter being

preferred.

13. The use, as substrate for cyclizing metathesis, of the compounds of formula (I):



where:

- Rf represents a carbon radical bearing a difluoromethyl group providing the link with the rest of the molecule, advantageously of at most 15, preferably of at most 10, carbon atoms;
- R_1 represents a hydrogen, an alkyl, including aralkyl, radical, preferably of 1 or 2 carbon atoms, or one of the specific radicals subsequently specified;
- R_2 represents a hydrogen, an alkyl, including aralkyl, radical, preferably of 1 or 2 carbon atoms, or an aryl radical;
- R_3 represents a hydrogen or a hydrocarbon-based radical, such as alkyl, including aralkyl, preferably of 1 or 2 carbon atoms, or an aryl radical, or forms, with R_4, an additional double bond so as to convert the allyl radical into a propargyl radical;
- R_4 represents a hydrogen or a hydrocarbon-based radical such as aryl or alkyl, including aralkyl, preferably of 1 or 2 carbon atoms, or, with R_3, forms an additional double bond so that the ethylenic bond becomes acetylenic, making it possible to go from an allyl radical to a propargyl radical;
- R_5 represents a hydrogen or a hydrocarbon-based radical such as an aryl radical or an alkyl, including aralkyl, radical, preferably of 1 or

2 carbon atoms;

- R_5 and R_4 may be fractions of said "Ar" group above, such that R_5 and R_4, and also the carbon which bears them, form a radical Ar;
- it being possible for one of R_1, R_2, R_4, R_3 and R_5 to be, in addition, chosen from specific trivalent, nitrile or acid functions, optionally and preferably in esterified form;
  - R' may be a hydrogen, a protective group, an aryl or an alkyl, including aralkyl, advantageously chiral;
  - R" is an allyl or homoallyl radical.

14. The use as claimed in claim 13, characterized in that just one of R' and R" is a homoallyl or allyl radical.